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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/801,481

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Bing Chen

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EXAMINER

MILLS, DONALD L

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,481

Applicant(s)

CHEN ET AL.

Examiner

Donald L Mills

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 6-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 19, the claim specifies *each segment in repeating sections of the received test signal* (See claim 19, lines 2-3.) However, parent claim 18 makes no mention of the structure of the test signal. It is unclear from the context of the claim what segment and sections are being referred to.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 14, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ashlock et al. (US 4,393,491), hereinafter referred to as Ashlock.

Regarding claim 1, Ashlock discloses an automatic self-test system for a digital multiplexed telecommunication system, which comprises:

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Generating a test signal at a source end point coupled to the packet network, the test signal having a predefined pattern of variation in average power level (Referring to Figure 1, controller A (source end point) generates a test signal for the audio link circuitry (packet network), the test signal comprises a one-kilohertz test tone (predefined pattern of variation). See column 7, lines 40-48.)

Transmitting the test signal over the packet network to a destination end point coupled to the packet network (Referring to Figure 1, the test signal is sent over the circuitry to the maintenance card 40. See column 7, lines 48-51.)

Recording the modified test signal at the destination end point/Examining the modified test signal to detect irregularities using the predefined pattern of variation as a standard/Determining whether the irregularities in the recorded signal represent packet loss (Referring to Figure 1, maintenance card 40 includes display circuitry for indicating when and on what line a failure has occurred, thereby storing and examining the test signal for errors, and controller addressable alarm when a malfunction occurs such as a loss of signal (loss of packet). See column 7, lines 51-53.)

Regarding claim 2, Ashlock discloses *wherein the test signal includes repeating sections, the sections further including a number of segments, the length of each segment equal to the smallest packet size in the packet network* (Referring to Figure 1, the one-kilohertz test tone, by definition comprises a number of repeating sections which can be divided into segments in which the length is equal to the smallest detectable signal in the audio circuitry. See column 7, lines 17-24.)

Regarding claim 14, Ashlock discloses an automatic self-test system for a digital multiplexed telecommunication system, which comprises:

A signal generator configured to generate a test signal (Referring to Figure 1, controller A generates a test signal for the audio link circuitry, the test signal comprises a one-kilohertz test tone. See column 7, lines 40-48,) *the test signal including repeating sections, the sections further including a number of segments, the length of each segment equal to the smallest packet size in the packet network* (Referring to Figure 1, the test signal comprises an eight-bit word format (sections) with eight digital words, the word is comprised of bits which is the smallest size in the audio link circuitry. See column 7, lines 17-24.)

A transmitter adapted to be coupled to a packet network (Referring to Figure 1, line cards 24 comprise transmitters coupled to the audio link circuitry.)

Regarding claim 18, Ashlock discloses an automatic self-test system for a digital multiplexed telecommunication system, which comprises:

A signal receiver (Referring to Figure 1, controller A. See column 7, lines 40-48.)

A recording unit for recording test signals received by the receiver, the test signals having a predefined pattern of variation in average power level (Referring to Figure 1, maintenance card 40 includes display circuitry for indicating when and on what line a failure has occurred, thereby storing and examining the test signal for errors, the test signal comprises a one-kilohertz test tone (predefined pattern of variation). See column 7, lines 51-53.)

A processor configured to: Analyze the recorded test signal to detect irregularities using the predefined pattern of variation as a standard/Determine if packet loss occurred during transmission of the signal through the packet network/Report test signal packet loss statistics

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(Referring to Figure 1, maintenance card 40 includes display circuitry for indicating when and on what line a failure has occurred, thereby storing and examining the test signal for errors, and controller addressable alarm when a malfunction occurs such as a loss of signal (loss of packet) on the audio line circuitry. See column 7, lines 51-53.)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashlock et al. (US 4,393,491), hereinafter referred to as Ashlock.

Regarding claims 3 and 15 as explained above in the rejections statement of claims 1 and 14; Ashlock discloses all of the claim limitations of claims 1 and 14 (parent claim).

Ashlock does not disclose *wherein the lengths of the repeating sections are greater than the largest packet size in the packet network.*

Ashlock teaches a one-kilohertz test tone comprises an eight-bit word format with eight digital words.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a digital word comprising more than eight-bits. One of ordinary skill in the art would have been motivated to do so in order to stress test the system.

Regarding claims 4 and 16, the primary reference further teaches *wherein the average power level of each segment is detectably different from average power levels of each of the other segments in a given section* (Referring to Figure 1, the average power of each digital word is by definition detectably different than each of the other digital words based upon the digital words location in reference to its neighboring digital word.)

Regarding claims 5 and 17 as explained in the rejection statement of claim 1, Ashlock discloses all of the claim limitations of claim 1 (parent claim).

Ashlock does not disclose *wherein the segment length is set to optimize an amount of data bits included in a packet taking into account in-network delay, and the section length is equal to four times the segment length.*

Ashlock teaches a one-kilohertz test tone comprises an eight-bit word format with eight digital words, which is optimal for a voice network wherein the samples are taken at 8,000 samples/sec and encoded with 8-bits per sample.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the digital words with 32-bit representation. One of ordinary skill in the art would have been motivated to do so in order to check for signal loss of long data streams.

Allowable Subject Matter

7. Claims 6-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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8. Claims 19-20 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills



September 30, 2004



**JOHN PEZZLO
PRIMARY EXAMINER**